

ABSTRACT OF THE DISCLOSURE

A combined flame arrester and intercooler for cooling intake gas for an internal combustion engine is disclosed. The intercooler comprises an elongated body having a longitudinal axis. The elongated body has a central passageway that extends substantially parallel to the longitudinal axis. An inlet opening is located on one end of the elongated body such that the intake gas enters the central passageway through the inlet opening. The intercooler further includes a plurality of cooling tubes forming at least a portion of the elongated body. The plurality of tubes substantially surround the central passageway. Each of the cooling tubes is spaced from an adjacent cooling tube such that an air flow path is formed there between. The intake gas is cooled by flowing past the cooling tubes. Preferably, the intake gas flows along the central passageway in the elongated body and radially outward therefrom through the air flow path between the cooling tubes. The intercooler includes at least one plate extending substantially orthogonal to the longitudinal axis. Each plate includes a central opening therein, which corresponds to the central passageway in the elongated body such that the intake gas is capable of flowing through the central opening. Each plate has a plurality of openings formed thereon about a periphery of the plate. One cooling tube is fed through each opening.